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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,237	07/12/2001	Zilan Shen	INTL-0582-US (P11591)	2116

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Timothy N. Trop
TROP, PRUNER & HU, P.C.
8554 KATY FWY, STE. 100
HOUSTON, TX 77024-1805

EXAMINER
SOWARD, IDA M

ART UNIT	PAPER NUMBER
2822	

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/904,237	Applicant(s) SHEN, ZILAN	
	Examiner Ida M Soward	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 18-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 18-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

This Office Action is in response to the remarks filed December 18, 2002.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art Figures 7-8 in view of Montague (US 2003/0001715 A1).

Admitted Prior Art Figures 7-8 teach a display **10** comprising: a transparent first electrode (row) **12**; a second electrode (column) **14**; and an organic light emitting material **16** between the first and second electrodes. However, Admitted Prior Art Figures 7-8 fail to teach a fuse between an electrode and light emitting material. Montague teaches a fuse **110** between an electrode **PLUG** and a light emitting material **100** (Figure 6, page 3, paragraphs [0043]-[0046]). Also, it is within the level of ordinary skill to interchange columns with rows and rows with columns. Since Admitted Prior Art Figures 7-8 and Montague are both from the same field of endeavor (fuse structures), the purpose disclosed by Montague would have been recognized in the pertinent art of Admitted Prior Art Figures 7-8. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the OLED of

Admitted Prior Art Figures 7-8 by incorporating the fuse of Montague to provide protection against overloading devices (page 1, paragraphs [0003]-[0004]).

Claims 4, 7-8 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art Figures 7-8 and Montague (US 2003/0001715 A1) as applied to claims 1-3 and 5-6 above, and further in view of Marr et al. (US 2002/0005564 A1).

Admitted Prior Art Figures 7-8 and Montague teach all mentioned in the rejection above. However, Admitted Prior Art Figures 7-8 and Montague fail to teach a fuse formed as a reduced width section of a non-transparent electrode. Marr et al. teach a fuse **20** formed as a reduced width section of a non-transparent electrode **24** (Figure 1A, pages 3-4, paragraphs [0040]-[0046]). Marr et al. further teach the fuse 20 extending transversely from a first electrode (Figures 1A-1B) and electrodes 224 & 226 deposited on a transparent sheet 212 (page 5, paragraphs [0058]-[0059]) . Since Admitted Prior Art Figures 7-8, Montague and Marr et al. are from the same field of endeavor (fuse structures), the purpose disclosed by Marr et al. would have been recognized in the pertinent art of Admitted Prior Art Figures 7-8 and Montague. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the OLED of Admitted Prior Art Figures 7-8 and the fuse of Montague by incorporating the reduced width section of Marr et al. to provide the simplest and most compact means of programming a semiconductor device (page 1, paragraph [0008]).

Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art Figures 7-8, Montague (US 2003/0001715 A1) and Marr et al. (US 2002/0005564 A1) as applied to claims 1-3 and 5-8 above, and further in view of Silvestre (US 2002/0036471 A1).

Admitted Prior Art Figures 7-8, Montague and Marr et al. teach all mentioned in the rejection above. However, Admitted Prior Art Figures 7-8, Montagure and Marr et al. fail to teach a fuse that includes a contact that contacts the light emitting material, the fuse including a fusible element between the contact and an electrode. Silvestre teaches a fuse **10** that includes a contact that contacts the light emitting material **11**, the fuse including a fusible element between the contact and an electrode (Figures 1-2, pages 1-2, paragraphs [0014]-[0018]). Since Admitted Prior Art Figures 7-8, Montague, Marr et al. and Silvestre are from the same field of endeavor (fuse structures), the purpose disclosed by Silvestre would have been recognized in the pertinent art of Admitted Prior Art Figures 7-8, Montague and Marr et al. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the OLED of Admitted Prior Art Figures 7-8, the fuse of Montagure and the reduced width section of Marr et al. by incorporating the contact of Silvestre to improve the luminescence of the display (page 1, paragraphs [0001]-[0004]).

Claims 10 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 7-8, Montague (US 2003/0001715 A1), Marr et al. (US

2002/0005564 A1) and Silvestre (US 2002/0036471 A1) as applied to claims 1-3 and 5-9 above, and further in view of Hilpert (5,859,772).

Admitted Prior Art Figures 7-8, Montague, Marr et al. and Silvestre teach all mentioned in the rejection above. Marr et al. further teach the fuse formed of the same material as the electrode (page 4, paragraphs [0041] and [0045]). However, Admitted Prior Art Figures 7-8, Montague, Marr et al. and Silvestre fail to teach a fuse formed of a material that fails by electron migration when the current density through the fuse exceeds a limit. Hilpert teaches a fuse formed of a material that fails by electron migration when the current density through the fuse exceeds a limit (Abstract). Since Admitted Prior Art Figures 7-8, Montague, Marr et al., Silvestre and Hilpert are from the same field of endeavor (fuse structures), the purpose disclosed by Hilpert would have been recognized in the pertinent art of Admitted Prior Art Figures 7-8, Montague, Marr et al. and Silvestre. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the OLED of Admitted Prior Art Figures 7-8, the fuse of Montague, the reduced width section of Marr et al. and the contact of Silvestre by incorporating the failing fuse of Hilpert to interrupt a short circuit current (abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents have been cited to further show the state of the art with respect to OLED having fuses:

Chernobrod et al. (US 2002/0191464 A1)

Perlov et al. (US 2002/0125504 A1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M Soward whose telephone number is 703-305-3308. The examiner can normally be reached on Monday - Thursday, 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 703-308-4905. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ims
March 7, 2003

AMIR ZARABIAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800